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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,097	04/23/2004	Yoshiaki Okuno	0925-0179PUS2	7525
2292 7590 10/30/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LESPERANCE, JEAN E	
			ART UNIT	PAPER NUMBER
			2629	
			NOTIFICATION DATE	DELIVERY MODE
			10/30/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

10/830,097

Applicant(s)

OKUNO ET AL.

Examiner

Jean E. Lesperance

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The application filed September 6, 2007 is presented for examination and claims 1-6 are pending.

#### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,781,185 ("Shin") in view of USPN 5,978,041 ("Masuda et al.").

Regarding claim 5, Shin teaches an output synchronization signal generation module configured to generate output vertical and horizontal synchronization signals based on an input horizontal synchronization signal and an input vertical synchronization signal (a first and a second synchronization detecting units 10 and 20 which respectively receive a vertical synchronization signal VSYNC and a horizontal synchronization signal HSYNC and both receive a clock signal MCLK. Detecting units 10 and 20 eliminate high-end noise of each signal and output VSYNC-O and HSYNC-O signals, respectively (column 2, lines 56-61)) (see Figure 5); and

an image conversion module configured to generate an output image signal based on an input image signal and the output vertical and horizontal synchronization signals (an image is generation as seen in Figs.4A-4C based on the input signal from the clock signal Fig.5 (MCLK) and the output vertical and horizontal synchronization signals VSYN and HSYN from the MUX 60 and 60 (see Figure 5)) which is interpreted as the image conversion module. The prior art teaches all the claimed limitations with the exception of providing the clock signal that is asynchronous to the input horizontal synchronization signal.

However, Masuda et al. teach the asynchronous clock generator 732 whose output frequency is controlled by the timing control circuit 77 generates a reading side clock signal (2) in asynchronization with an input horizontal synchronizing signal and at a frequency  $f_{RCLK}$  which is  $m$  times ( $m$ : a natural number) of the frequency  $f_{sub.H}$  of the input horizontal synchronizing signal (See Figure 64).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the asynchronous clock generator as taught by Masuda et al. in the system disclosed by Shin because this would provide a display device having a frequency resolution conversion function for displaying faithfully to an inputted video signal at low cost with little degradation in image quality due to scanning line interpolation (column 6, lines 52-56).

Regarding claim 6, Shin teaches generating output vertical and horizontal synchronization signals based on an input horizontal synchronization signal and an input vertical synchronization signal (a first and a second synchronization detecting

units 10 and 20 which respectively receive a vertical synchronization signal VSYNC and a horizontal synchronization signal HSYNC and both receive a clock signal MCLK.

Detecting units 10 and 20 eliminate high-end noise of each signal and output VSYNC-O and HSYNC-O signals, respectively (column 2, lines 56-61)) (see Figure 5); and

generating an output image signal based on an input image signal and the output vertical and horizontal synchronization signals (an image is generation as seen in Figs.4A-4C based on the input signal from the clock signal Fig.5 (MCLK) and the output vertical and horizontal synchronization signals VSYN and HSYN from the MUX 60 and 60 (see Figure 5)). The prior art teaches all the claimed limitations with the exception pf providing the clock signal that is asynchronous to the input horizontal synchronization signal.

However, Masuda et al. teach the asynchronous clock generator 732 whose output frequency is controlled by the timing control circuit 77 generates a reading side clock signal (2) in asynchronization with an input horizontal synchronizing signal and at a frequency  $f_{RCLK}$  which is  $m$  times ( $m$ : a natural number) of the frequency  $f_{sub.H}$  of the input horizontal synchronizing signal (See Figure 64).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the asynchronous clock generator as taught by Masuda et al. in the system disclosed by Shin because this would provide a display device having a frequency resolution conversion function for displaying faithfully to an inputted video signal at low cost with little degradation in image quality due to scanning line interpolation (column 6, lines 52-56).

***Allowable Subject Matter***

4. Claims 1-4 are allowed.
5. The following is an examiner's statement of reasons for allowance: the claimed invention is directed to an image display device.

Independent claim 1 identifies a uniquely distinct feature "a second calculation circuit obtaining a cycle information of the output horizontal synchronizing signal, based on the ideal cycle of the horizontal synchronizing signal and the panel clock signal and a horizontal synchronizing signal generator for generating the output horizontal synchronizing signal, based on the cycle information".

Independent claim 2 identifies a uniquely distinct feature "obtaining a cycle information of the output horizontal synchronizing signal, based on the ideal cycle of the output horizontal synchronizing signal and a panel clock signal used to display the converted image and generating the output horizontal synchronizing signal, based on the cycle information".

Independent claim 3 identifies a uniquely distinct feature "a controller for generating a control signal for controlling a cycle of an output horizontal synchronizing signal used for reading out the accumulated image data from the memory, according to image size information of the input image signals, cycle information of the input horizontal synchronizing signals, and cycle information of the second clock and a synchronizing signal generator for outputting the output horizontal synchronizing signal based on the control signal".

Independent claim 4 identifies a uniquely distinct feature "generating a control signal for controlling a cycle of an output horizontal synchronizing signal used for reading out the accumulated image data, according to image size information of the input image signals, cycle information of the input horizontal synchronizing signals, and cycle information of the second clock and outputting the output horizontal synchronizing signal based on the control signal".

### **Conclusion**

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the ably examiner should be directed to Jean Lesperance whose telephone number is (571) 272-7692. The examiner can normally be reached on from Monday to Friday between

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10:00AM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(571) 273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jean Lesperance



Art Unit 2629

Date 10/20/2007



RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600